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ABSTRACT

An experimental group of 21 general and special education preservice teachers received training in specific instructional behaviors, focusing on instructional strategies, classroom management and organization, presentation of subject matter, and learning environments. They also received training using the Appraisal Alignment Training model, which was developed to help teachers-in-training gain competence in mastering effective teaching practices. This model includes microteaching, peer appraisal and feedback, and self-directed goal setting to teach those behaviors expected to be demonstrated by graduates of teacher training programs. Findings suggest that, compared to two control groups, both regular and special education trainees in the experimental group developed more behaviors thought to be important to effective teaching by appraisal system evaluators from the Texas Education Agency. (JDD)

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Teacher Training in Special and General Education: An Appraisal Alignment Approach

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Teacher Training in Special and General Education:

An Appraisal Alignment Approach

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Running head: Teacher Training

Abstract

The present article describes a research study in which general and special preservice teachers were trained to demonstrate specific instructional behaviors by use of an experimental teacher training model. The Appraisal Alignment Training Model was developed to help teachers-in-training gain competence in mastering effective teaching practices as defined by state or district mandated teacher appraisal instruments. The components of the training model include microteaching, peer appraisal and feedback, and self-directed goal setting to teach those behaviors expected to be demonstrated by graduates of teacher training programs.

Students were randomly assigned to one of three groups and provided differential training. The experimental training group received eight hours of training conducted by a state certified inservice trainer utilizing the state mandated teacher appraisal instrument. In addition, this group received two hours of training using the Appraisal Alignment Training Model. The second group of trainees received the state inservice training only. The third group of preservice trainees received an equal number of hours of instruction in preparing traditional lesson plans.

Analyses suggest that both regular and special education trainees developed behaviors thought to be important by state education agency officials to a significantly greater degree by use of the Appraisal Alignment Training Model. It is suggested that teacher training programs and public school personnel develop closer working relationships for the advantage of trainees, and that preservice teacher trainers incorporate components of the experimental training model to more closely align those behaviors taught and those behaviors assessed.

Teacher Training in Special and General Education

An Appraisal Alignment Approach

The reaction by state education agencies over the severe criticism of American education in recent years has been widespread and varied. In an effort to improve the quality of both public schools and teacher training institutions new legislation has been implemented as one avenue to promote positive change in many states. As part of this process of educational reform many education agencies have adopted teacher appraisal instruments that provide specific guidelines for the improvement of classroom instruction by emphasizing the teacher as a direct and active leader. In many cases these appraisal systems have also been used to provide guidelines for contract renewal determinations and salary adjustment decisions for instructional personnel.

As a direct result of state mandated teacher appraisal systems used to provide specific guidelines for the improvement of classroom instruction a teacher training program has been developed at The University of Texas at San Antonio which emphasizes the common behaviors considered to be most importantly demonstrated by all teachers at all levels as defined by each district or State Board of Education. The Teacher Appraisal Alignment Training Model was designed to incorporate the existing standards by which effective instructional practices are defined and measured based on each state's own appraisal system. The principal purpose of the program was to emphasize the local appraisal device as the stimulus material for developing and measuring appropriate teacher performance prior to full-time teaching.

The Appraisal Alignment Training Model has been conceptualized as a valuable supplement to current practices now being employed in teacher training programs in use today. In an effort to validate the appraisal alignment approach as a viable training tool in both special and general education a study was conducted during the Spring of 1988.

METHOD

Sample

The subjects for the current study consisted of forty-nine elementary education majors at the sophomore and junior levels (average undergraduate credit hours completed was 83.4). Males comprised 12.2 percent of the participants, while 87.8 percent were females. The population sample contained 28.6 percent Hispanic students and 71.4 percent non-Hispanic students. Average age of the participants was 28 years and 3 months.

Procedure

Subjects were randomly placed into one of three experimental groups. Group "A" consisted of twenty-one preservice elementary education majors (9 elementary education majors with generic special education selected as their area of certification, and 12 elementary education majors with any other area of specialization other than generic special education as a declare certification area, for instance, science, mathematics, reading, social studies, early childhood education, bilingual education). Group "B" consisted of fifteen participants; 9 generic special education certificate

seekers and 6 general educators. Group "C" consisted of thirteen participants; 7 generic special education certificate seekers and 6 general educators.

The preservice trainees in Group "A" received eight hours of classroom training on domains I through IV of the Texas Teacher Appraisal System (Texas Education Agency, 1986) by an official state trainer from the Texas Education Agency, Service Center, Regior 20. These domains included: I Instructional Strategies, II Classroom Management and Organization, III Presentation of Subject matter, IV Learning Environment. The classroom training presented to the trainees was identical to that of all teachers receiving orientation to the Texas Teacher Appraisal System in all 1,051 independent school districts in the state of Texas.

An additional 2 hours of specific training using the Teacher Appraisal Alignment Training Model were provided to group "A" only. The Alignment Model consists of five sequential steps integrating the elements of microteaching (Allen & Ryan 1969, Pfeiffer & Dunlap, 1982) and a behaviorally based self-directed goal setting approach similar to those described by McGreal (1983) and Redfern (1980). This direct training system is build around the state mandated teacher appraisal system.

The Training Model:

Step One: A preservice trainee is asked to present a short mini-lesson on video tape to a group of from 3 to 6 peers focusing on specific behaviors as identified by the teacher evaluation device under

consideration. The behaviors to be demonstrated are taken directly from the instructional categories or domains of the state or district teacher appraisal system.

Step Two: Both the trainees and his or her peers view the mini-lesson as soon after the presentation as possible. Each participant plays the role of instructional supervisor by rating the trainee's presentation based on its technical strength and weaknesses using the appraisal model under consideration.

Step Three: The trainee is asked to analyze the presentation. The participants validate and discuss their observations and the accuracy of the presenting trainee's observations and analysis. If appropriate, the trainee has the option to set objective, observable, and measurable goals pertaining to any one of the components of the appraisal model in order to improve a subsequent presentation. In the event the trainee is confident that the presentation is of his or her best ability goal setting does not take place.

Step Four: Those trainees who set goals are given the opportunity to reteach their mini-lesson to a different group of peers incorporating his or her own behaviorally based goal statements to increase teaching effectiveness as measured by the appraisal instrument.

Step Five: In the final step the instructional supervisor and trainee meet to view the mini-lesson on video tape and evaluate the acquisition of the goal statements as demonstrated by specific teaching behaviors.

The preservice trainees in Group "B" received the same eight hours of classroom training as a group "A" trainees on all subcomponents of the Texas Appraisal System by the same official trainer from the State Education Agency. To equate all groups on the dimension of time, group "B" preservice trainees spent an additional 2 hours viewing and discussing the finished products of their micro-lessons on videotape. No opportunity was given for group "B" trainees to re-teach their mini-lessons or change the finished tape in any way. Prior to the taping, no opportunity was given for setting goals and no additional instruction or skill development was given other than by the training from the official of the Texas Education Agency.

Preservice trainees in Group "C", the control group, spent ten hours of classroom time involved in discussions of how to construct traditional lesson plans which contained the following elements: (a) a statement of the purpose of the lesson in behavioral terms, (b) a description of teacher activities to accomplish the purpose of the lesson, and (c) a description of student activities to accomplish the purpose of the lesson. No other training was given in relation to the local appraisal device.

RESULTS

Each of the forty-nine video tapes containing one micro-teaching lesson was randomly assigned a number. The taped lesson was then independently evaluated by use of the Texas Teacher Appraisal System by between two to five trained evaluators from the Texas Education Agency, Education Service Center, Region 20. The evaluators were unaware as to the assignment of trainees into any of the training groups.

After receipt of the 232 scored protocols interobserver reliability was calculated through the use of a Pearson Product Moment Correlation of the rater's assigned scores for each participant (Guilford, 1965). The results of this analysis revealed a high positive correlation (+.89) for all domains rated by the independent evaluators.

Table 1 illustrates the results of the experiment analyzed by use of the Statistical Analysis System (Ray, 1982). A 3 (training groups "A", "B", and "C") X 2 (subjects types: pre-service special educators, pre-service general educators) X 4 (domains I, II, III, and IV of the Texas Appraisal System) factorial arrangement was employed in the design. Data were analyzed by use of a three-way Analysis of Variance (ANOVA). An alpha level of .01 was set as the criterion for the determination of statistically significant differences. Subsequent Tukey's Standardized Range Tests (Dunn & Clark, 1987) were used to determine where the differences existed within the significant F ratios. Also, Barlett's test for homogeneity of variance (Dyer & Keating, 1980) was utilized to ascertain if subgroups were equivalent in terms of variance. Outcomes of this procedure indicated equivalence of subgroups across the three levels of training.

Since each of the four appraised domains of the Texas Teacher Appraisal System have different ceiling levels (the maximum possible points obtained for each domain was different) a weighting procedure was used in which scores earned were converted into percentiles for comparative purposes.

Insert Table 1 about here

As can be seen in Table 1, there were two significant main effects. Significant differences were found for the training groups "A:, "B", and "C" ($F(2) = 40.18$, $p < .001$). Results of Tukey's t-test for the training groups revealed that student performance was clearly superior for training group "A" when compared to students in treatment conditions "B" or "C". In addition, performance of students in treatment condition "B" was significantly superior to that of the student in treatment condition "C". It seems apparent that all trainees in condition "A" were better able to demonstrate necessary teaching behaviors in order to achieve higher scores as measured by the Texas Teacher Appraisal System than trainees in groups "B" or "C", respectively.

The F ratio ($F(1)=1.83$, $p < .177$) for subject type; special education trainees and regular education trainees was non significant at the .01 level of confidence. However, significant main effect differences were obtained between all trainees' scores on the four domains of the Texas Appraisal System ($F(3) = 49.74$, $p < .001$). Tukey's Standardized Range Test was again used to test within the significant F ratios found between domains I-IV. Results obtained from this procedure indicated statistically significant differences between scores obtained by trainees on domains I (Instructional Strategies), II (Classroom Management and Organizations) and IV (Learning Environment) in favor of domain III (Presentation of Subject Matter).

It can also be noted from table 1, that F ratios for the interaction training groups X domains was non significant at the .01 alpha level. However, in examining the mean scores obtained by special education trainees on table 3, it can be seen that the preservice special education trainees scored higher in many instances as compared to scores obtained by the regular education trainees. Other non significant interactions at the .01 level of confidence included: Training groups X subject type; subject type X domains; and, training groups X subject type X the four domains.

Insert Table 2 about here

One additional statistical comparison was conducted to ascertain if there were differenced between those students in training group "A" who, after receiving feedback on their presentations from their peers in step three of the training sequence, chose to re-tape their lesson incorporating self generated goals. The results of a t-test of mean differences between the eight students in training group "A" who chose to re-tape their lesson and the thirteen students in training group "A" who chose not to re-tape their lessons yielded a t-ratio of 3.05(df = 19), indicating a statistically significant difference beyond the .01 level of confidence in favor of the 38 percent who chose to re-tape their lesson.

All other statistical comparisons between and among cells were found to be non significant at the .01 level of confidence.

Discussion of Results

The results indicate that the preservice educators in training group "A" who were exposed to the Appraisal Alignment Training Model demonstrated behaviors that were evaluated by the Texas Education Agency, as significantly superior as compared to students in training groups "B" and "C". Additionally, students in training group "B" demonstrated behaviors that were evaluated as significantly superior when compared to students in training group "C".

Providing preservice special and regular education trainees with training equivalent to all teacher in Texas public schools resulted in evaluations in which these students demonstrated behaviors that were appraised to be superior to students who had been recipients of a more traditional orientation of teacher education. Further, providing students additional training in which they had an opportunity to video-tape lessons to demonstrate specific, well defined teaching behaviors, practice these essential skills in a non-threatening environment, receive feedback from peers and supervisors on essential skills, and set goals for self improvement resulted in performances that were judged to be statistically superior to students who received only the training equivalent to that received by all Texas public school teachers.

Non significant differences between scores obtained by general education trainees and special education trainees indicate that both groups of trainees are equally amenable to training by the Texas Appraisal System and additional training provided through the Appraisal Alignment Training

Model. Higher, yet statistically non-significant scores obtained by the special education trainees in many instances may reflect the emphasis in the special education program on acquiring and demonstrating specific teaching behaviors with exceptional children in required practica experiences that preservice general educators are not offered.

The significant differences found between scores obtained by trainees on the domains must be interpreted in light of the environment in which they were demonstrated. When one considers the individual domain content and focus, and the context in which these were obtained (on video tape with peers in a contrived microteaching lab), we might expect relatively higher scores in the areas measured by domain I Instructional Strategies when compared to scores obtained on domain II Classroom Organization and Management, and domain IV Learning Environment. We might also expect to find higher scores earned on domain III Presentation of Subject Matter when compared to scores obtained on domain II Classroom Management and Organization, and domain IV Learning Environment. In essence, the trainees were better able to demonstrate teaching behaviors related to demonstrating specific "Instructional Strategies" and the "Presentation of Subject Matter" within this context, than in the more general "Classroom Management and Organization", and "Learning Environment" domains.

Results of the final comparison of students in training group "A" who chose to re-teach their lesson compared to students who chose not to confirm finding by Hunter (1971) and McGreal (1983) indicating that individuals who are given the opportunity to evaluate their performance and

set their own measurable, objective goals tend to demonstrate superior performance in the acquisition of those goals than individuals who have goals mandated by a second party.

TRAINING IMPLICATIONS AND RECOMMENDATIONS

In light of the results of the present study several implications become evident. First, in order to increase their relevance and effectiveness, teacher training institutions should incorporate into their curricula behaviors thought to be most important as reflected in teacher appraisal instruments presently in use in the field today. By doing so teacher training programs and local education agencies can avoid the indictment that Ryan (1970) leveled almost twenty years ago toward public education,"...universities tend to act as distant producers of teachers, and the public schools act as uncritical consumers" (p. 187). If progress is to be made in more closely matching teacher training programs with the needs of public schools,universities and school systems will have to develop new relationships as partners in preparing beginning teachers to more fully rise to the diverse challenges of their new careers.

Secondly, the present findings suggest that by combining already successful approaches, in this case the elements of microteaching and self-directed goal setting, a very powerful methodology can be developed that is practical, action oriented, and allows each student ample opportunity to develop those behaviors thought to be most significant as defined by the local evaluation device. Within the Appraisal Alignment Training Model, trainees were given repeated opportunities to demonstrate highly defined behaviors using the state mandated teacher evaluation device as the

"yardstick" to measure increments of improvement. The highly defined behaviors within the appraisal system were video-taped and exposed to examination and evaluation by the trainee himself as well as his or her peers. Each participant had the opportunity to "wear the hat of the instructional supervisor" by being given the opportunity to use the evaluation tool as an evaluator and then to give appropriate feedback to the target trainee. By going through this process on both sides of the camera, each participant had the opportunity to observe the technical aspects of teaching from the point of view of the evaluator and evaluatee.

Microteaching and self-directed goal setting were integral components of the present methodology and are often overlooked elements of effective teacher training programs. Both practices have been validated as effective and used for many years as separate entities. By combining the two not only has an effective supplement for teacher training been developed but also a philosophy of what teacher education should be. A process of training individuals to demonstrate objective and clearly definable behaviors while at the same approaching the process from a non-threatening and humanistic perspective with ample opportunity for practice and subsequent improvement.

We believe the success of the current program belongs in large part to utilizing a highly organized and clearly operationalized system of defining effective teacher behavior. State education agencies and school districts responsible for developing appraisal instruments must realize that poorly defined and subjective appraisal systems that are not based on effectiveness research findings will do little good in improving

instructional practices in the classroom. Teacher evaluation must go beyond the mind-set of simply weeding-out bad or incompetent teachers. There must be commitment and support from the leadership at the top of educational organizations for the development of effective evaluation systems for instructional improvement at every grade level and in every classroom.

The gulf between teacher education programs and the needs of local school districts can be bridged through the use of instructional evaluation instruments that are clear, concise, objective, and facilitate measurement of precisely defined teacher behavior. By incorporating such precision based evaluation systems in the public schools, Schools of Education can then match these expectations to the experiences of their preservice trainees.

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Table 1

Analysis of Variance

Source of Variation	df	SS	F	P-Values
Training Groups A,B,C	2	332.771	40.18	0.0001
Subject Type	1	7.592	1.83	0.1775
Texas Appraisal System Domains	3	617.794	49.74	0.0001
Training Groups A,B,C X Domains	6	41.256	1.66	0.1334
Training Groups A,B,C X Subject Type	2	8.379	1.01	0.3657
Subject Type X Domains	3	35.358	2.85	0.0392
Training Groups A,B,C, X Subject Type X Domains	6	28.445	1.15	0.3384

Table 2
Experimental Group "A"
Means and Standard Deviations by Domains

Domain	General Educators		Special Educators	
	M	SD	M	SD
Instructional Strategies	11.47	2.19	11.42	1.99
Classroom Management	11.25	1.29	10.30	.59
Subject Matter Presentation	12.37	1.8	12.61	2.6
Learning Environment	7.25	1.24	7.55	1.54

Table 2 (continued)
Experimental Group "B"
Means and Standard Deviations by Domains

Domain	General Educators		Special Educators	
	M	SD	M	SD
Instructional Strategies	8.54	.31	10.28	.59
Classroom Management	9.75	.11	9.42	.31
Subject Matter Presentation	10.43	.1	10.44	.13
Learning Environment	5.11	.76	5.75	.14

Table 2 (continued)
Experimental Group "C"
Means and Standard Deviations by Domains

Domain	General Educators		Special Educators	
	M	SD	M	SD
Instructional Strategies	5.37	4.31	9.54	.11
Classroom Management	9.08	.71	9.18	.71
Subject Matter Presentation	8.63	1.9	7.54	.26
Learning Environment	4.54	1.46	5.25	.66

Authors Notes

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